

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/14105

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B01J8/00 B01J8/18 B01J8/24

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01J C04B C22B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 033 413 A (HYDROCARBON RESEARCH INC) 23 July 1991 (1991-07-23) column 4, line 43 - line 51 column 5, line 50 - line 52 abstract; figures	1-4,10, 18-23
X	US 2 826 460 A (SMITH JOHN H ET AL) 11 March 1958 (1958-03-11) column 2, line 35 - line 48	1,18-23
A	GB 951 245 A (GAS COUNCIL) 4 March 1964 (1964-03-04) page 2, line 2 - line 23; figures	1,18-23
A	US 2 901 421 A (DREW ROBERT D ET AL) 25 August 1959 (1959-08-25) the whole document	1,18-23
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

16 April 2004

Date of mailing of the international search report

23/04/2004

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 716 856 A (FRANK WOLFGANG P ET AL)  5 January 1988 (1988-01-05)  column 2, line 48 - line 69  -----</p>	1-5

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/14105

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5033413	A	23-07-1991	US 4947803 A AU 5655990 A DE 69003098 D1 DE 69003098 T2 EP 0471744 A1 FI 96540 B NO 914314 A ,B, WO 9013772 A1	14-08-1990 29-11-1990 07-10-1993 10-03-1994 26-02-1992 29-03-1996 08-01-1992 15-11-1990
US 2826460	A	11-03-1958	NONE	
GB 951245	A	04-03-1964	DE 1174695 B	23-07-1964
US 2901421	A	25-08-1959	NONE	
US 4716856	A	05-01-1988	AT 87077 T DE 3688007 D1 EP 0206066 A2	15-04-1993 22-04-1993 30-12-1986